

# VICTORIAN ENTOMOLOGIST

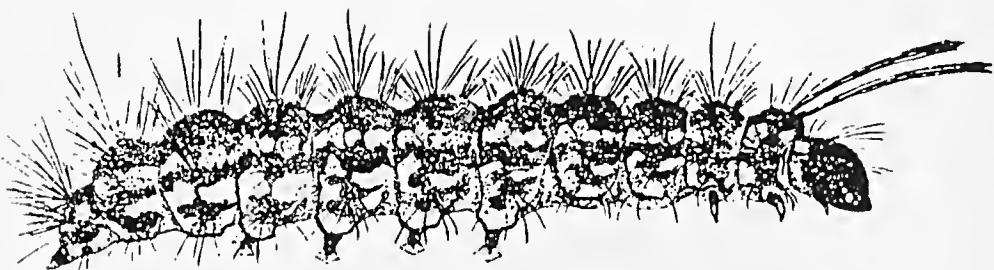


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*News Bulletin of The Entomological Society of Victoria Inc.*

## THE ENTOMOLOGICAL SOCIETY OF VICTORIA (Inc) MEMBERSHIP

Any person with an interest in entomology shall be eligible for Ordinary membership. Members of the Society include professional, amateur and student entomologists, all of whom receive the Society's News Bulletin, the Victorian Entomologist.

### OBJECTIVES

The aims of the Society are:

- (a) to stimulate the scientific study and discussion of all aspects of entomology,
- (b) to gather, disseminate and record knowledge of all identifiable Australian insect species,
- (c) to compile a comprehensive list of all Victorian insect species,
- (d) to bring together in a congenial but scientific atmosphere all persons interested in entomology.

### MEETINGS

The Society's meetings are held at Clunies Ross House, National Science Centre, 191 Royal Parade, Parkville, Victoria, at 8 p.m. on the third Friday of even months, with the possible exception of the December meeting which may be held earlier. Lectures by guest speakers or members are a feature of many meetings at which there is ample opportunity for informal discussion between members with similar interests. Forums are also conducted by members on their own particular interest so that others may participate in discussions.

### SUBSCRIPTIONS

Ordinary Member	\$20.00
Country Member	\$16.00 (Over 100 km from GPO Melbourne)
Student Member	\$12.00
Associate Member	\$ 5.00 (No News Bulletin)

No additional fee is payable for overseas posting by surface mail of the news bulletin. Associate Members, resident at the same address as, and being immediate relatives of an ordinary Member, do not automatically receive the Society's publications but in all other respects rank as ordinary Members.

**Cover design** by Alan Hyman.

**Cover illustration** of Magpie Moth or Sennco Moth larvae, *Nyctemera amica*  
by Cait Symington.

## MINUTES OF THE ANNUAL GENERAL MEETING, 17 JUNE 1994

The President, P. Carwardine, opened the meeting at 8.05 p.m.

**Present:** D. Dobrosak, I. Endersby, A. & E. Farnworth, E. & P. Grey, C. Herd, C. Mechan, D. Mechan, T. New, D. & N. Stewart, K. Walker.  
**Apologies:** M. Hunting, P. Mechan.

The President introduced the speaker, Ms Pam Clunic (Department of Conservation and Natural Resources) to talk on "Action Statements under the Flora and Fauna Guarantee Act". Her talk provoked considerable discussion on the functioning of the Act and how the Society might participate in practical conservation of invertebrates. A vote of thanks was proposed by P. Carwardine.

**Minutes:** Minutes of the 1993 Annual General Meeting [*Victorian Entomologist* 23(4): 69-71] were passed. (Endersby/Dobrosak).

**Correspondence:** I. Endersby tabled a letter informing the Society that Clunies Ross House is in the process of being sold, and will not be available for meetings after the next few months. Received (Walker/D. Stewart).

**Treasurer's Report:** I. Endersby presented the audited accounts for the financial year, and spoke to these. The following motion was then put: 'That the statement of receipts and payments for the year ended 31 December 1993, together with the statement of assets at 31 December 1993 as listed and circulated to all members be received and adopted'. (Endersby/Walker) (passed).

At 17 June 1994, the Society's finances are as follows: General account \$3703, Le Souef award account \$2372, Junior encouragement fund \$383, all credit balances. Membership is 112, plus five associates and 12 subscribers.

**Committee reports:** P. Carwardine, in the absence of committee convenors, reported briefly on the ENTRECS and Conservation Committee.

**Editor's Report:** D. Dobrosak thanked all contributors and helpers who had assured the success of the *Victorian Entomologist* over the past year. A vote of thanks proposed by K. Walker was adopted by acclamation.

**Excursions:** P. Carwardine reminded members of the following excursions planned for the forthcoming season:

1. Jell's Park - 24 September
2. The Pines Reserve - 3 December

The President then handed the meeting to the retiring public officer, I. Endersby, to conduct elections of office-bearers for 1994-1995. All positions were declared vacant, and nominations called for. The following were elected unopposed:

President:	P. Carwardine
Vice-Presidents:	(vacant)
Secretary:	T. New
Treasurer:	I. Endersby
Editor:	D. Dobrosak
Public Officer:	I. Endersby
Excursions Secretary:	P. Carwardine
Council member:	D. Mechan

Concern was expressed from the floor that insufficient nominations or volunteers to fill all positions were available, and the incoming Council is empowered to seek additional members (D. Mechan/Carwardine - carried).

Expressions of interest for membership of Committees were then sought with little response: ENTRECS: D. Dobrosak; Conservation (none). Members are to be asked to express their interest and ideas for supporting the Society's activities, and Council was requested to seek ways of doing this.

The incoming President resumed the Chair, and thanked members and council for their help over the past year. Proposals for Membership were received on behalf of: W. Elder and G. Newland.

#### General Business:

- i) Society venue. With the sale of Clunies Ross House, the Society urgently needs a new venue for its meetings. Ideas from any member are requested, and should be sent to I. Endersby as soon as possible.
- ii) K. Walker expressed concern over the low attendance at recent meetings, and suggested that the time was opportune to re-assess the society's role, the timing and content of meetings, and other factors which might augment its viability and appeal. Comments from all members will be welcomed.

#### Exhibits and observations:

- i) P. Carwardine showed a living bull-ant (*Myrmecia*) which he has now maintained on a sugar-water diet for about two months. He commented on the value of dilute ammonia in helping to reduce the immediate pain of ant (and other) stings.
- ii) E. Grey commented on the possibly seasonal incidence of sawfly larvae on *Eucalyptus camaldulensis* in Melbourne.

The meeting was closed at 9.50 p.m.

## MINUTES OF COUNCIL MEETING, 15 JULY 1994

The meeting was opened by the President at 8.23 pm

Present:	P. Carwardine, D. Dobrosak, R. Field, M. Hunting, S. Smith.
Apologies:	I. Endersby, T. New
Minutes:	Minutes of the March Council Meeting ( <i>Vic. Ent.</i> 24(3): 55-57) were passed. (Accepted R. Field/D. Dobrosak)
Correspondence:	Detailed and received (Hunting/Field)
Treasurer's Report:	Due to illness I. Endersby was not able to be present at the meeting.
Editor's Report:	D. Dobrosak announced that sufficient articles were in hand to complete the August issue.
Excursions:	Details of the Jell's Park excursion were discussed. P. Carwardine will pass details to the editor for publication in the August issue of <i>Vic. Ent.</i>
Committee Report:	M. Hunting tabled the ENTRECS convenor's report. The convenor was not able to attend the Annual General Meeting due to illness. (Report accepted King/Dobrosak).

### General Business:

- i) **Society venue.** The Society will have its last meeting at Clunies Ross House on 19 August. P. Carwardine informed the meeting that various members had obtained details of various alternative venues. Council accepted what was clearly the best alternative to the soon to be closed Clunies Ross House, as negotiated by Dr. Allan Kelliecar. This new venue will be Room AG27 at the La Trobe University Carlton Campus. This is the Lincoln Institute in Swanston Street, Melway reference Map 2B E10.
- ii) **ENTRECS.** Discussion ensued regarding the status of the ENTRECS records. The records are currently in the form of paper cards. It was recognised that the records must be transferred to a computer data base. Councillors will investigate options available. M. Hunting agreed to continue on the Committee but not as convenor. One more member is required to complete this committee.
- iii) **Committee membership.** Council discussed the vacant positions on the ENTRECS and Conservation committees. Positions are still available on these committees. Any members able to assist would be most welcome.

The Meeting was closed at 9.33 pm.

# THE INSECT FAUNA INHABITING THE WOOD OF SOME ACACIA spp. IN SOUTH-EASTERN AUSTRALIA.

by G.A. Webb<sup>1</sup>

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## Abstract

The wood boring insects of four species of *Acacia*, *A. dealbata*, *A. melanoxylon*, *A. mucronata* and *A. terminalis*, and their predators, parasites and other associates, from south-eastern New South Wales are listed. Data on emergence periods and larval longevity are given for some species of Cerambycidae, Buprestidae, Curculionidae and Belidae.

## Introduction

Wattles (*Acacia* spp.) are hosts to a wide range of wood boring insects. However, the literature consists mainly of scattered host records (e.g. Hawkeswood and Peterson 1982, Hockey and de Baar 1988, Webb 1987, Webb *et al.* 1988, Williams 1985), and few detailed studies of the whole fauna associated with the timber of wattles. Several of the early entomologists in Australia (Froggatt 1902, Gallard 1916, Gurney 1911, Illidge 1922) provided lists of species from the timber and foliage of various wattles with limited notes on the biology of some insect species. New (1981), in reviewing the literature on arthropods associated with wattles, noted that Cerambycidae and Buprestidae were the most commonly reported wood-borers. More recent work has served to confirm this observation (e.g. Bashford 1991, Hockey and de Baar 1988, Webb 1987, 1990, 1993, Webb *et al.* 1988, Williams 1985). Bashford (1991), van den Berg (1980, 1982) and Webb (1990) provided data on targeted wattle species which has helped to provide an overall view of the insect faunas associated with these wattles. Nevertheless, the life-histories of many of the insects which inhabit the wood and foliage of wattles are relatively unknown.

This study reports on wood boring insects and their parasitic, predatory and other associates, from four species of *Acacia*, *A. dealbata* (Link), *A. mucronata*, (Wildl. ex H. Wendl.), *A. melanoxylon* (R.Br.) and *A. terminalis* (Salisb.) from south-eastern New South Wales. Although the insect fauna of *A. dealbata* has recently been studied in detail (Bashford 1991, Webb 1990), data on the other three species is scant.

## Materials and Methods

During 26-31 January, 1985, timber of four species of *Acacia* was collected from Coolangubra State Forest near Bombala on the southern tablelands of New South Wales (elevation 900-1000m asl).

1. *A. dealbata* - billets (ca. 10 cm. diameter) were taken from two dead standing (ca. 8 m. tall) trees in tall open eucalypt forest of *Eucalyptus fastigata* H. Deane and Maiden, *Eucalyptus obliqua* L. Herit. and *Eucalyptus viminalis* Labill.

2. *A. melanoxylon* - billets (ca. 15 cm. diameter) were taken from the branches of a tall (ca. 10 m. tall) tree in open eucalypt forest of *Eucalyptus ovata* Labill. and *Eucalyptus pauciflora* Sieber ex. Spreng.
3. *A. mucronata* - ten whole dead standing *A. mucronata* shrubs (ca. 2 m tall, 5 cm. diameter at base) were cut into billets (1-5cm in diameter). The overstorey vegetation was open forest of *Eucalyptus sieberi* L.A.S. Johnson and *E. viminalis*.
4. *A. terminalis* - five whole dead standing *A. terminalis* shrubs (ca. up to 3 m. tall, 8cm diameter at base) were cut into billets (ca. 1-6 cm. diameter). The overstorey vegetation was open eucalypt forest of mostly *E. sieberi*.

For *A. dealbata*, *A. mucronata* and *A. terminalis*, all timber was taken from dead, standing trees while, *A. melanoxylon* timber was collected from dead branches of a large, living tree. The time of death of each tree or branch was unknown, but given the extent of infestation and the emergence of insects soon after the collection of the timber, infestation most likely occurred during the previous spring/ summer period (1983-84). Timber was cut into ca. 50 cm. long billets and transported back to the laboratory in Sydney, where it was stored in a sheltered outdoor enclosure in cages constructed of 1mm wire mesh, at ambient temperature and humidity. Emerged insects were collected at regular intervals, usually weekly during spring and summer and monthly for the remainder of the year. Timber was stored until December 1988.

## Results

### Wood-boring Fauna

Four families of wood-boring Coleoptera were recorded from *Acacia* spp. during the study (Table 1). Of these, the Cerambycidae were the most abundant (14 species). Also reared were five species of Buprestidae, three species of Curculionidae and two species of Belidae. The largest number of taxa were reared from *A. mucronata* (18 species), followed by *A. dealbata* (14 species), *A. melanoxylon* (8 species) and *A. terminalis* (5 species). The difference in number of species is not viewed as a reflection of the relative attractiveness and suitability of individual *Acacia* species because varying amounts of infested timber were available for study and the four *Acacia* spp. differed in their growth forms.

The most abundant wood-boring taxa were, in order, *Bethelium signiferum* (Newman), *Ancita eracogaster* (Boisd.), *Saeolaemus chadwicki* (Janczyk), *Melabasis pupuraseens* F., *Notoceresium elongatum* McKown, *Stenoderus suturalis* (Olivier) and *Pentacosmia seoparia* Newman. The wood-boring faunas inhabiting the timber of *A. dealbata* and *A. mucronata* were similar. This may be related to the similarities in the growth forms (tall, narrow stems) of the two species. In contrast, the fauna of *A. melanoxylon* branches was characterised by fewer species and dominance by the largest species, *A. eracogaster*. *A. eracogaster* was not reared from *A. dealbata* timber.

### Emergence Periods

Almost all emergences occurred during spring and summer (Figures 1-3) and mostly during the months of September and October. The emergence period for *N. elongatum* was dissimilar to all other species in that emergences only occurred in late summer (February - March). No emergences were recorded during the period April to July in any year.

The emergence periods for the more abundant species varied in length from 2 to 8 months with core emergence periods (in which the majority of emergences occurred) varied from 1 month for *Z. divisa* and *M. ordinata* to 5 months for *P. scoparia*.

### Larval Longevity

Few species and individuals emerged during the first (truncated) emergence period in the cages. Only *B. signiferum*, *N. elongatum*, *P. scoparia* and *Phlyctaenodes pustulatus* (Hope) were recorded during this period (Table 1).

Many species emerged over several years. Two species (*B. signiferum* and *N. elongatum*) were recorded in all five emergence periods (Table 2). Two species (*A. crocogaster* and *M. purpurascens*) emerged during the last four periods. For these more numerous species it is likely that the multiple emergence periods were at least partly the result of re-infestation. This is supported by observations of pairs of copulating *B. signiferum* and *A. crocogaster* adults in the cages and what appeared to be oviposition by females into cracks in the bark and timber. Nevertheless, extended larval life in the timber, in excess of one year, cannot be excluded. For some of the less numerous species, emergence only in the last few years of the study presents clear evidence of extended larval life-spans. For instance, *Pempsamacra carteri* McKeown emerged only in the fifth emergence period suggesting that under the experimental conditions imposed, larval life-span was at least four years. Similarly, three species of *Melobasis* (*M.* sp. nov. [Levey], *M. nervosa* Boisd. and *M. naias* Obenb.) and *Rhinophthalmus* sp. appeared to have larval life-spans of at least 3 years. Seven species (*S. suturalis*, *Zoedia divisa* Pascoe, *Ceresium* sp., *Ebuophora octoguttata* White, *Phacodes personatus* Erich., *Melobasis obscurella* Thoni and *Saccolaelmus* sp.) emerged in the third emergence period indicating a larval life-span of at least two years. Of the remaining species, first emergence was in the second emergence period. However, in some cases this varied according to the *Acacia* spp. involved. For instance, *Mecynopus cothurnatus* Erich. emerged from *A. mucronata* and *A. melanoxylon* in the second year but not from *A. dealbata* until the fifth year. Similarly, *N. elongatum* emerged for a second time in the fifth emergence period, three years after any previous emergences.

### Other Fauna

Three families of predatory beetles, Cleridae, Melyridae and Trogossitidae were recorded from timber during the study. Few individuals were reared from the timber. Hymenopteran parasitoids of the families Braconidae (5 species) and Aulacidae (2 species) were also reared from the timber. A single tachinid fly was also reared from *A. dealbata*. None of these parasites or predators could be linked directly with any of the wood-boring Coleoptera.

Other species of insects reared from the timber included beetles of the families Dermestidae and Tenebrionidae from *A. melanoxylon*. Psocoptera were present on and beneath the bark of all four *Acacia* spp.. One species of Blattoidea as also collected from the beneath the bark of *A. melanoxylon*.

### Discussion

The wood-boring fauna inhabiting the timber of *Acacia* spp. in Coolangubra State Forest is relatively diverse. For *A. dealbata*, the fauna compares favourably with previous studies

(Bashford 1991, van den Berg 1982, Webb 1990) and with the entire known fauna of *A. dealbata* (Table 2 and 3). The faunas of the other three species of *Acacia* are less well known. Few species are known from *A. melanoxylon* (Table 3) and, to my knowledge, none at all from *A. mucronata* and *A. terminalis*.

The seasonal emergence periods for the more common species were generally consistent with published data, where it exists. Most species emerged during the spring-summer period and particularly during late spring-early summer. This is consistent with the emergence periods recorded for wood-borers of *A. dealbata* from northern New South Wales (Webb 1990). Bashford (1991) recorded peak emergence activity in mid-summer. This later peak of emergence activity in Tasmania may be due to lower spring temperatures in that state.

A number of species appear capable of surviving in timber for more than one year. While it is not possible to speculate on larval life-span under natural conditions in the forest, some species are capable of surviving as larvae and/or pupae for up to 4 years under enclosed conditions. Retained timber was sprayed with water occasionally, but not regularly. How this moisture regime compares with field conditions is difficult to say but it is likely that the timber experienced less extremes of both temperature and moisture.

For some cerambycid species, Bashford (1991) was able to correlate beetle size with billet diameter. However, most species fed in a range of billet sizes. While no direct correlations were made in this study, there appeared to be little relationship between beetle size and billet diameter. *A. crocogaster* was reared in large numbers from the larger *A. melanoxylon* billets but was absent from *A. dealbata* timber, even the larger billets. In contrast, a considerable number were reared from small diameter *A. mucronata* billets. Many of the smaller species were also reared from a range of billet diameters.

Wood-borers of the families Cerambycidae, Buprestidae, Curculionidae and Belidae are generally secondary agents of wood decay (New 1981, Bashford 1991, Webb 1990). Wattles can be predisposed to attack by these borers by a number of factors. In Tasmania (Bashford 1991), *A. dealbata* is seriously weakened by defoliation by insects leading to die-back of the crown. Smaller species of Cerambycidae attack the upper twigs in the following spring/summer period which further weakens the tree. Death may be aided by later massive attack of the stem by species of *Ancita* (Cerambycidae) and *Saccolaelmus* (Curculionidae). Death of the tree then allows attack by a wide range of wood-boring beetles. Similarly, other stress-inducing factors such as water and nutrient imbalances, root disease, damage caused by wind and lightning and herbicide damage may initiate the process of insect attack.

#### Acknowledgements

B. Levey (British Museum), G. Holloway (Australian Museum), R. Eldridge (Forestry Commission of NSW) and J. Lawrence, T. Weir and E. Zimmerman (Australian National Insect Collection) kindly assisted in identifying insects reared during this study.

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Table 1: Insects reared from the wood of some *Acacia* from south-eastern New South Wales.

	<i>Acacia dealbata</i>	<i>Acacia melanoxylon</i>	<i>Acacia mearnsii</i>	<i>Acacia terminalis</i>
COLEOPTERA	8±85	85-86	86-87	87-88
Cerambycidae				
<i>Pempelomara carteri</i> McKown		2		
<i>Rhizophthorus laetus</i> sp.				
<i>Bathelium signiferum</i> (Newman)	15	6	4	1
<i>Cerostomus</i> sp.				
<i>Eupogonius octoguttatus</i> White	1			
<i>Macrones capito</i> Pascoe	2			
<i>Aleurocanthus cothurnatus</i> Erichson		1	1	
<i>Nanocerostomus elongatum</i> McKown	5	17	1	
<i>Pachydissus sericeus</i> Newman			1	
<i>Phacodes personatus</i> Erichson			2	
<i>Phylloctenes phasianus</i> (Hope)			1	
<i>Sinodenerus satyralis</i> (Olivier)	2	2	4	2
<i>Tessaromma undatum</i> Newman			4	1
<i>Zoedia divisa</i> Pascoe	2	1		1
Lamellicae				
<i>Anicta croceogaster</i> (Boisduval)				
<i>Illaena exilis</i> Erichson	2			
<i>Pentacostia scoparia</i> Newman	1	14	2	
Buprestidae				
<i>Melobasis purpurascens</i> F.	3	17	1	6
<i>Melobasis obscurella</i> Thomson				
<i>Melobasis natalis</i> Oberholser				
<i>Melobasis</i> sp. nov. [Levy]	1			
<i>Melobasis nervosa</i> Boisduval				2

Table 1: Insects reared from the wood of some *Acacia* from south-eastern New South Wales,

	<i>Acacia dealbata</i>	<i>Acacia melanoxylon</i>	<i>Acacia mucronata</i>	<i>Acacia terminalis</i>
<b>Curculionidae</b>	84-85 85-86	86-87 87-88	88-89 85-86	86-87 87-88 88-89 84-85 85-86
<i>Cossine</i>				
<i>Pentamimus</i> sp.				
<b>Laemostictinae</b>				
<i>Saccolaimus chahwichti</i> (Jančík)	3	2		
<i>Saccolaimus</i> sp.			44	
<b>Bethylidae</b>				
<i>Bethia bimaculatus</i> Kirby			2	
<i>Bethia nr. brunnens</i> Guérin				3
<b>Cleridae</b>				8
<i>Eleale nr. vindus</i> Guérin	1			4
<i>Neocrodius ephippiatus</i> Boisduval	2	3	2	
<b>Melyridae</b>				
<i>Balanophorus</i> sp.	1			
? <i>Carphurus</i> sp.	2			
<b>Trogossitidae</b>				
<i>Leperia decorata</i> Er.	3		5	
<b>Tenebrionidae</b>				
<i>Menephilus colydioides</i> Ench.			1	3
<i>Obnoma ruficornis</i>			1	1
<i>Tritoma columbina</i> Er.			4	
<b>Dermestidae</b>				
<i>Trogoderma nr. apicipenne</i> Reitt.			1	1
<i>Trogoderma nr. morio</i>			1	

Table 1: Insects reared from the wood of some *Acacia* from south-eastern New South Wales.

	<i>Acacia dealbata</i>					<i>Acacia melanoxylon</i>					<i>Acacia mearnsii</i>					<i>Acacia terminalia</i>				
	♂	♀	♂	♀	♂	♀	♂	♀	♂	♀	♂	♀	♂	♀	♂	♀	♂	♀	♂	♀
<b>HYMENOPTERA</b>																				
Aulacidae																				
<i>Aulacus</i> sp.																				
<i>Aulacothrix rubidus</i> Schlett.																				
Braconidae																				
sp. 1																				
sp. 2																				
sp. 3																				
sp. 4																				
sp. 5																				
<b>DIPTERA</b>																				
Tachinidae																				
Sp.																				
Psecoptera																				
Blattoidea																				
Sp.																				

Table 2. Emergence periods for all wood-boring species. Data for the four *Acacia* spp. are combined.

SPECIES	84-85	85-86	86-87	87-88	88-89
<b>CERAMBYCIDAE</b>					
<i>Bethelium signiferum</i> (Newman)	*	*	*	*	*
<i>Notoceresium elongatum</i> McKeown	*	*	*	*	*
<i>Pentacosmia scoparia</i> Newman	*	*	*		
<i>Phlyctaenodes pustulatus</i> (Hope)	*				
<i>Anicita crocogaster</i> (Boisduval)	*	*	*	*	*
<i>Illaena exilis</i> Erichson	*	*			
<i>Tessaromma undatum</i> Newman	*	*			
<i>Macrones capito</i> Pascoe	*				
<i>Mecynopus cothurnatus</i> Erichson	*				*
<i>Pachydissus sericus</i> Newman	*				
<i>Stenoderus suturalis</i> (Olivier)		*	*	*	*
<i>Zoedia divisa</i> Pascoe		*	*	*	*
<i>Ceresium</i> sp.		*	*		
<i>Eburophora octoguttata</i> White		*			
<i>Phacodes personatus</i> Erichson		*			
<i>Rhinopthalmus</i> sp.				*	
<i>Pempsamaca carteri</i> McKeown					*
<b>BUPRESTIDAE</b>					
<i>Melobasis purpurascens</i> F.	*	*	*	*	*
<i>Melobasis obscurella</i> Thomson		*	*		
<i>Melobasis naiae</i> Obenberger			*		
<i>Melobasis</i> sp. nov. [Levey]		*	*	*	*
<i>Melobasis nervosa</i> Boisd.			*		*
<b>BELIDAE</b>					
<i>Belus</i> nr. <i>brunneus</i> Guerin	*	*	*		
<i>Belus bimaculatus</i> Kirby	*				
<b>CURCULIONIDAE</b>					
<i>Pentamimus</i> sp.	*	*			
<i>Saccolaemus chadwicki</i> (Janczyk)	*				
<i>Saccolaemus</i> sp.		*			

Table 3 Wood-boring beetles recorded previously from *Acacia dealbata* and *Acacia melanoxylon*

	<i>Acacia dealbata</i>	<i>Acacia melanoxylon</i>
<b>Cerambycidae</b>		
<b>Aseminae</b>		
<i>Arhopalus syriacus</i> (Reitter)	8	
<b>Cerambycinae</b>		
<i>Ambeodontus pilosus</i> (Pascoe)	1	
<i>Amphirhoe decora</i> Newman	1	9
<i>Aphneope quadrivittata</i> Poll	1	
<i>Bethelium signiferum</i> (Newman)	1, 7, 8	9
<i>Eburophora octoguttata</i> White	8	2
<i>Macrones capito</i> Pascoe	8	
<i>Mecynopus cothurnatus</i> Erichson	1	
<i>Notoceresium elongatum</i> McKeown	8	
<i>Notoceresium</i> sp.	1	
<i>Pachydissus sericus</i> Newman	6	6
<i>Phacodes obscurus</i> (Fabricius)	8	
<i>Phacodes personatus</i> Erichson	1	
<i>Phoracantha punctata</i> (Donovan)	6	
<i>Piesarthrius marginellus</i> Hope		5, 6
<i>Rhinopalpus nasutus</i> (Schuck.)	1, 8	9
<i>Sophron inornatum</i> Newman	7	
<i>Stenoderus suturalis</i> (Olivier)	1, 8	
<i>Syllitus grammicus</i> (Newman)	1, 7, 8	
<i>Tessaromma undatum</i> Newman	7, 8	
<i>Uracanthus acutus</i> Blackburn	3	
<i>Zoeda divisa</i> Pascoe	1, 8	
<b>Lamiinae</b>		
<i>Ancita</i> nr. <i>antennata</i> (Pascoe)	6	
<i>Ancita australis</i> (Boisduval)	3	
<i>Ancita</i> nr. <i>australis</i> (Boisduval)	6	
<i>Ancita crocogaster</i> (Boisduval)	1, 3, 8	5
<i>Ancita marginicollis</i> (Boisduval)	1, 3, 6, 7, 8	6, 9
<i>Illaena exilis</i> Erichson	1, 8	
<i>Illaena inconspicua</i> (Pascoe)		7, 9
<i>Pentacosmia scoparia</i> Newman	8	
<i>Phaeoptate</i> ? <i>albula</i> Pascoe		9
<i>Platymopsis lateralis</i> (Pascoe)	7	
<i>Probatoxys</i> <i>plumula</i> (Newman)	1, 7	
<b>Bostrychidae</b>		
<i>Xylobosca bispinosa</i> (Macleay)	1, 8	
<i>Xylobosca canina</i> (Blackburn)	1, 8	

**Table 3** Wood-boring beetles recorded previously from *Acacia dealbata* and *Acacia melanoxylon*

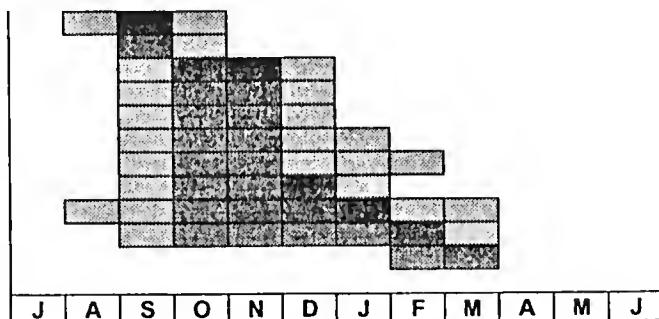
	<i>Acacia dealbata</i>	<i>Acacia melanoxylon</i>
<b>Buprestidae</b>		
<i>Cisseus</i> sp.	1	
<i>Cisseus</i> nr. <i>laticollis</i> ??		6
<i>Melobasis</i> nr. <i>intricata</i> Blackburn	8	
<i>Melobasis purpurascens</i> Fabricius	1, 4	4
<b>Curculionidae</b>		
<b>Laemosaccinae</b>		
<i>Saccolaemus</i> sp. indct.	1, 8	
<b>Scolytinae</b>		
<i>Phloeaphtharus acaciae</i> Lea	8	
<b>Otiorhynchinae</b>		
<i>Myllocerus</i> nr. <i>multimaculatus</i> Pascoe	8	
<b>Hylobiinae</b>		
<i>Orthorhinus cylindrirostris</i> (Fabricius)	1, 8	
????		
<i>Pentanimus australis</i> (Erichson)	1	
<i>Pachyura cinerea</i> (Blanchard)	1	
<b>Belidae</b>		
<i>Belus bidentatus</i> (Donovan)	1, 8	
<i>Belus bimaculatus</i> Pascoe	1	
<i>Belus</i> nr. <i>brunneus</i> Guerin	8	
<b>Lyctidae</b>		
<i>Trogoxylon ypsilon</i> Lesne	1	
<b>Anthribidae</b>		
<i>Doticus palmaris</i> Pascoe	6	
" <i>Anthribus</i> " <i>bispinus</i> Erichson	8	

References : 1. Bashford (1991) 2. Best (1881) 3. Dixon (1908) 4. Hawkeswood (1992) 5. Hockey and de Baar (1988) 6. van den Berg (1982) 7. Webb (1987) 8. Webb (1990) 9. Williams (1985)

**Figure 1** Emergence periods (by month) for wood-boring beetles of *Acacia* spp from Bombala. Darker hatching represents the core emergence periods.

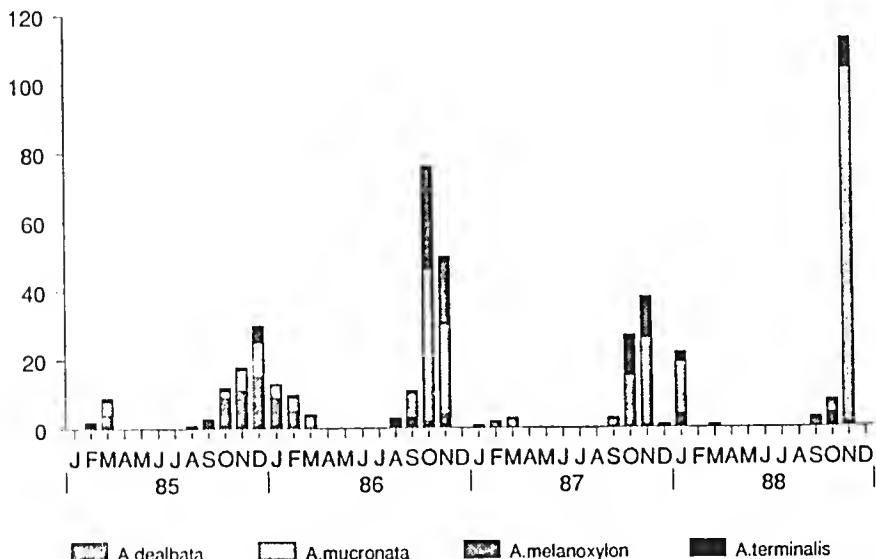
**Species**

*Z. divisa*  
*M. ordinata*  
*M. nervosa*  
*S. chadwicki*  
*S. suturalis*  
*A. crocogaster*  
*B. signiferum*  
*B. nr. brunneus*  
*M. purpurascens*  
*P. scoparia*  
*N. elongatum*



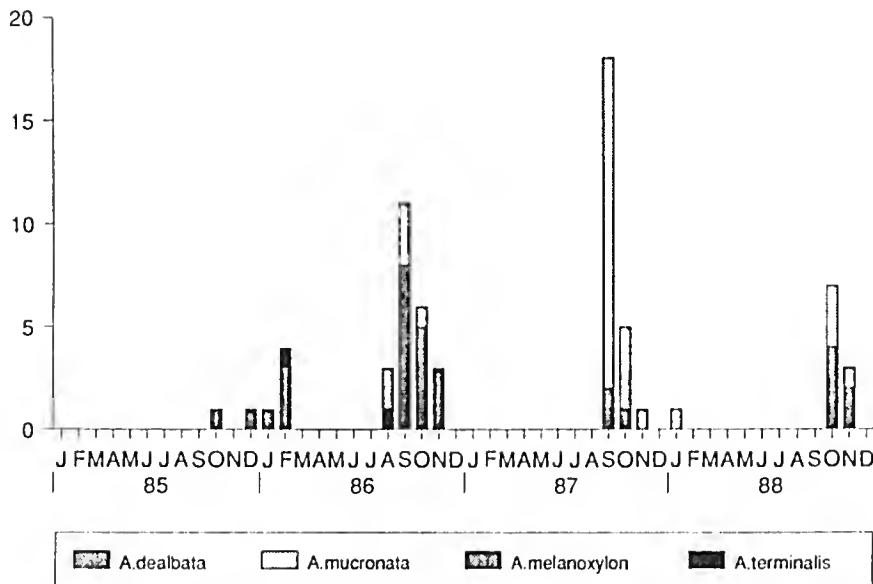
**Figure 2** Emergence periods for all cerambycids (combined) from 1985 to 1988.

## All Cerambycids



**Figure 3** Emergence periods for all *Melobasis* spp. from 1985 to 1988.

## *Melobasis* spp.



### EXCURSION TO JELL'S PARK

**DATE** Saturday 24 September 1994  
**MEETING PLACE** car the Visitors Centre, enter Jell's Park via Waverley Road.  
**MEETING TIME** 10 AM  
Bring lunch  
Melways reference Map 71 K7.  
**ENQUIRIES** Peter Carwardine (03) 571 8958

## A TRIP TO THE BAW BAW PLATEAU

by David and Joyce Holmes  
33 Fig Street, Dromana Victoria, 3936

In February we decided to have a short break away, prior to packing up to move house. So, on Thursday February 17 we travelled to Rawson for a few days. Not having been to that area before we found the weather was too cool for collecting in the mountains, so the following day we decided to do a sightseeing trip to Walhalla. It was indeed an eye opener to see the old gold fields where in days gone by, many tons of gold had been won. We visited the museum, which displays many photographs and relic of the gold rush years. One wonders, with the limited availability of land, where the 10,000 inhabitants all lived! Although it is now a historical ghost town, it is very interesting, and well worth at least a days visitation.

By Saturday 19 the weather had warmed up, so we went to St. Gwinear. Here we found the usual mountain butterflies - *Oreixenica correae*, *Heteronympha solandri*, and a few *Neolucia hobartensis*.

On Monday 21 we travelled to Mt. Baw Baw, via Willow Grove. At Mt. Baw Baw we collected *Neolucia mathewi*, *N. hobartensis*, *Oreixenica correae*, *O. kershawi*, *Zizina labradus*. We returned home to the caravan park via Noojee, Necrim Sth, Shady Creek, Willow Grove to Rawson. It had been a long, tiring journey.

This was not an extended trip, as our time was limited. To reach the summit of the mountains, at both Mt. Baw Baw and Mt. St Gwinear, would need a few extra hours of walking, which now I am not able to do. However, it extends the range of my collecting and data to a few more areas of the mountain country.

### References

- Common, I. F. B. & Waterhouse, D. F. 1981. Butterflies of Australia. Revised Edition, Angus & Robertson, Sydney.
- Holmes D. & J. 1993. A trip to the old and the new mountain country. *Vic. Ent.* 23 (4) 78-79.
- Holmes D. & J. 1990. A return to the North East Mountains. *Vic. Ent.* 20 (2) 53-55.
- Holmes D. 1988. Collecting in the North East Mountain Area. *Vic. Ent.* 18 (3) 43-44.
- Holmes D. R. 1984. Collecting in the North East Mountains. *Vic. Ent.* 14 (4) 39-40.

### ERRATA

I misidentified the food plant listed for the Australian skipper, *Telicota eurotas euchlora* Lower, in the article "Biological notes and distribution records of butterflies from southern Queensland, New South Wales and South Australia" [Vic. Ent. 25 (3), p69]. The water bound sedge ('*Rhynchospora*') is in fact *Cladium procerum* S.T. Blake.

I thank Louisa Murray, National Herbarium of New South Wales, for the correct identification of the sedge.

Andrew Atkins, 9 Bathurst Street, Dudley NSW 2290.

## RECENT ARTICLES OF INTEREST

Compiled by Ian Faithfull

Law, B.S. & Lean, M., 1992. An observation of Little Red Flying-foxes (*Pteropus scapulatus*) feeding on lerps. *Australian Mammalogy* 15:143-145. Bats vigorously lick leaves of *Eucalyptus intermedia* to feed on lerps and honeydew of *Eucalyptoloma* sp. and aggressively fight over this food. Nymphs are probably also eaten. Faecal analysis failed to show any evidence of this feeding, so can be misleading.

Boulton, A.J., 1992. "Rollers" and "carriers": field observations of carrion removal by trogidae beetles (*Omorgus strzeleckensis*) in arid north-eastern South Australia. *Transactions of the Royal Society of South Australia* 116:133-136. These beetles carry irregularly shaped dingo faecal pellets on their backs or roll cylindrical pieces in front of themselves up dune slopes.

Wallman, J.F., 1993. First South Australian record of the carrion-breeding blowfly *Calliphora nigrithorax* Malloch (Diptera: Calliphoridae). *TRSSA* 117:193. Range extension of 500 km, to Adelaide.

Barker, S., 1993. Seventeen new species of Australian Buprestidae (Insecta: Coleoptera) and a host plant of *Castiarina uptoni* (Barker). *TRSSA* 117:15-26.  
16 spp. *Castiarina* plus *Themognatha gordoniensis*; host plant *Dicrastylis georgei* Munir.

Barker, S., 1993. A new Australian species of *Calodema* (Coleoptera: Buprestidae). *TRSSA* 117:191-192. *C. rubrimarginatum* from Rex Ra., Qld.

Wells, A. & Cartwright, D., 1993. Females and immatures of the Australian caddisfly *Hyalopsyche disjuncta* Neboiss (Trichoptera), and a new family placement. *TRSSA* 117:97-104. Descriptions. Transfer to Dicpudopsidae.

Austin, A.D., White, T.C.R., Maclzer, D.A. & Taylor, D.G., 1993. Biology of *Etiella behrii* Zeller (Lepidoptera: Pyralidae): a pest of seed lucerne in South Australia. *TRSSA* 117:67-76. 6 native and 18 introd. legume host plants; 5 instars; 4 overlapping generations; peak moth numbers late Dec. and late Jan.; ten parasitoid spp., 2 pathogens, general predators; phenology in relation to lucerne crops.

Thumler, T.A. & Austin, A.D., 1994. Biology of *Phylacteophaga froggatti* (Hymenoptera: Pergidae) and its parasitoids in South Australia. *TRSSA* 118:99-113. Leaf-blister Sawfly, an emerging pest of plantation and ornamental eucalypts. Host plants listed. Biology of, and illustrated key to, 17 spp. hymenopteran parasitoids (Braconidae, Ichneumonidae, Chalcididae, Elasmidae, Eulophidae, Eupelmidae, Pteromalidae).

Nijhout, H.F., 1994. Developmental perspectives on butterfly mimicry. *Bioscience* 44:148-. "Recent insights into development of colour patterns have led to a simpler, more complete view of butterfly genetics." Changes which result in mimicry can be better explained as expansions and contractions in dark coloured areas rather than light areas.

Stebnicka, Z.T. & Howden, H.F., 1994. A revision of the Australian genus *Podotenus* A.Schmidt (Coleoptera: Scarabaeoidea: Aphodiini). *Invertebrate Taxonomy* 8:17-62. Part of a welcome revision of Australian Aphodiinae, 30 spp. (21 new) described or redescribed.

Wasps close to plague levels, says scientist. *The Age* 8 Apr. 1994 p.6. Dr. Phillip Spradbery urges the federal government to establish a national strategy to fight *Vespa germanica*.

Dunn, K.L., Glimpse captured of an insect close to extinction. *Chronicle Country* (Toowoomba Newspapers Pty.Ltd.), April 1994, p.2; Tiny rare butterfly. *Chinchilla News* (Qld.) 10 Mar. 1994 p.15; Rare butterflies need ants, *The Courier Mail* (Brisbane) 21 Apr. 1994, p.3; Uni to save rare butterfly, *Southern Star* (Sunnybank, Q.) 27 Apr. 1994, p.13; Future uncertain for endangered species, *Griffith Gazette* (Griffith University) 9(4):1, 10 May; Stork, M., Kelvyn is in search of the rare Darling Downs Jewel, *Journal* (Dandenong) 133(45):2 13 June. Illegal firewood collecting and roadworks have destroyed part of the only known area, 320 m of roadside near Leyburn in the Darling Downs, where Australia's rarest butterfly, *Hypochrysops piceata*, lives. Discovered in 1967, 12 butterflies were recorded at the last count (*Courier Mail*). It requires senescent, insect damaged bulldocks, *Allocasuarina luehmannii*, as larval food, to shelter larvae and the attendant ant (*Anonychomyrma intemerans* spp. group) and for pupation sites. There are two broods per year and butterflies live about 10 days. Fires or severe drought could push the species to extinction. Details of biology and photos. Chinchilla Field Naturalists Club assisting in searches for other colonies. Study financed by Qld.Dcpt.of Environment and Heritage and conducted by Griffith Uni. Faculty of Environmental Sciences. (Cr.K.L.Dunn)

Help save the birdwing butterfly, *The Helix* 32: 37, Oct.-Nov. 1993. Plan to halt fatal attraction, *The Courier Mail* (Brisbane) 21 April 1994 p.3. Less than 1% of the original subtropical rainforest habitat of *Ornithoptera richmondia* remains. Don Sands of CSIRO is asking schools to establish its foodplants and study variation in leaf toughness in different environments. 45 schools from Maryborough to Grafton were each due to receive 12 vines in April. He also wants any sighting records of the butterfly and distribution data for its native foodplants and of the introduced Dutchman's Pipe vine, which should be pulled out. Write to Sue Scott, CSIROSEC, Private Bag 3, Indooroopilly, 4068. (Cr.K.L.Dunn)

New, T.R.(Ed.) 1993. *Conservation Biology of Lycaenidae (Butterflies)*. Occasional Papers of the IUCN Species Survival Commission No.8. 173 pp. Introduction to biology and conservation (21 pp. T.New), regional assessments for Europe, Japan, North America, Neotropics and South Africa, plus Australia (7 pp. T.New), detailed accounts by specialists of about 70 taxa (1-3 pp. each). Australia: *Hypochrysops* spp. (D.P.A.Sands), *Acrodipsas illidgei* (P.R.Samson), *Paralucia pyrodiscus lucida* (New), *Parlucia spinifera* (E.M.Dexter & R.L.Kitching), *Pseudalmenus chlorinda* (G.B.Prince). Includes Riodininae and Styginae (Cr.T.R.New).

Material for inclusion in future issues is welcome and may be sent to the compiler at 126 Nicholson St., Abbotsford, Vic., 3067.

## ON THE GRAPEVINE

The Lepidoptera unit at the ANIC, CSIRO Canberra, has commenced the preparation of a fully revised handbook on the Australian butterflies. Michael Braby assisted by Ted Edwards and Ebbe Nielsen will be writing the text for the new book. The photography for the colour plates will be by Mr Ederic Slater. The book is scheduled for publication in late 1996 and will replace the 1981 edition of I.F.B. Common & D.F. Waterhouse's *Butterflies of Australia*.

It would be an opportune time for members and readers to collate any new information that they may have which would advance the knowledge of the Australian fauna and could be included in the new book.

The 'Darling Downs Jewel butterfly' (*Hypochrysops piceatus*) has received increased publicity in south-eastern Queensland over the last six months. A number of regional newspapers have now run segments on the degradation to the butterfly's habitat through road widening and related activities. The alarming situation also gained publicity in the Queensland *Courier Mail* along with the CSIRO's Richmond birdwing butterfly rehabilitation project. Brisbane radio station 4BC's talkback commentator Greg Carrie briefly interviewed Kelvyn Dunn on April 22nd regarding its endangerment. Kelvyn commented that to neglect this situation could result in the loss of this animal, a whole species, from the globe. Greg queried whether the butterfly was to 'some degree' aware of its perilous situation? Indeed, we hope not - lest it die of fright!

Kelvyn Dunn and Roger Kitching have now submitted a report, *Distribution, status and management of the piceatus jewel butterfly on the Darling Downs, Queensland*, to the Conservation Strategy of the Queensland Department of Environment and Heritage.

## FINAL CALL FOR 1994 NOMINATIONS: J.C. 'ZOO' LE SOUËF MEMORIAL AWARD

Nominations for the 1994 award are now invited. Details of background, nomination, etc. were published in the December 1992 issue of the *Victorian Entomologist*. Nominations must reach the Council at the following address by 30 September 1994:

Entomological Society of Victoria  
c/- 66 Wiltonvale Avenue  
Hoppers Crossing, Vic. 3029

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The Society welcomes contributions of articles, papers or notes pertaining to any aspect of entomology for publication in this Bulletin. Contributions are not restricted to members but are invited from all who have an interest. Material submitted should be responsible and original. Statements and opinions expressed are the responsibility of the respective authors and do not necessarily reflect the policies of the Society.

Contributions may be typed on A4 paper or *preferably* sent to the Hon. editor on an IBM formatted disk in *Microsoft Word for Windows, WordPerfect* or *text* with an enclosed hard copy .

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## DIARY OF COMING EVENTS

### 19 August - General Meeting

The Conservation Status of the Giant Gippsland Earthworm  
by Beverley VanPraagh (Museum of Victoria)

### 16 September - Council Meeting

### 24 September - Excursion to Jell's Park

Scientific names contained in this document are *not* intended for permanent scientific record, and are not published for the purposes of nomenclature within the meaning of the *International Code of Zoological Nomenclature*, Article 8(b). Contributions are not refereed, and authors alone are responsible for the views expressed.

BENTON